

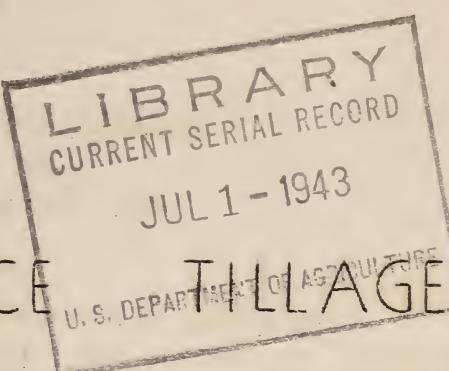
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Reserve

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SUB-SURFACE TILLAGE

ON

ONE MAN'S FARM



CONSERVATION FARMING

- MORE FOOD
- BETTER FOOD
- SOIL SAVINGS
- LABOR SAVINGS

A WARTIME NECESSITY

SUB-SURFACE TILLAGE
ON
ONE MAN'S FARM

PETE LOOS, A FARMER IN LOGAN COUNTY, COLORADO, BELIEVES IN TRYING NEW IDEAS WHICH SEEM TO BE SOUND IN PRINCIPLE, SO WHEN TECHNICIANS OF THE SOIL CONSERVATION SERVICE TALKED TO HIM ABOUT SUB-SURFACE TILLAGE, HE DECIDED TO GIVE IT A TRY.

"I'VE TRIED MULCHING IN GARDENS AND TREE PLOTS," MR. LOOS SAID, "AND IF I CAN KEEP A CONDITION LIKE THAT IN MY FIELDS, I AM SURE IT WILL CONSERVE WATER AND INCREASE MY YIELDS. YOU KNOW, IF WE GET THE MOISTURE AND SAVE IT, WE CAN RAISE CROPS IN THIS COUNTRY. THE SOIL IS CERTAINLY PRODUCTIVE."

MR. LOOS STARTED OUT IN THE SPRING OF 1942 WITH SOME CONCERN ABOUT DIFFICULTY HE MIGHT HAVE WITH HEAVY STUBBLE. BUT, DETERMINED TO GIVE THE PRACTICE A FAIR TRIAL, HE PROCEEDED, SEEING THAT THE PEACOCK MACHINE HE HAD CONVERTED TO A SUB-SURFACE TILLER WAS PROPERLY EQUIPPED TO HANDLE EVEN THE HEAVIEST STUBBLE.

A YEAR LATER, MR. LOOS AND AN SCS TECHNICIAN WENT OVER HIS FARM AND DISCUSSED HIS EXPERIENCE WITH SUB-SURFACE TILLAGE. "I HAD TO EQUIP MY MACHINE WITH ROLLING CUTTERS TO BREAK THE WAY. AFTER THAT, I HAD VERY LITTLE TROUBLE WITH THE TRASH," THE FARMER BEGAN.

ASKED IF HE HAD EXPERIENCED ANY OTHER DIFFICULTIES, MR. LOOS SAID: "WELL, OF COURSE, I HAVEN'T RUN INTO ALL CONDITIONS, I SUPPOSE, BUT THOSE THAT I HAVE DEALT WITH, I'VE OVERCOME. I FOUND OUT, FOR EXAMPLE, THAT I CAN'T GET OUT AT DAYBREAK TO BEGIN MY FALLOW OPERATIONS IF THERE IS A HEAVY DEW BECAUSE THEN THE STRAW IS TOUGH AND MY ROLLING CUTTERS GIVE ME TROUBLE. BUT, IF I WAIT UNTIL THE DEW IS OFF, I CAN

OPERATE WITHOUT ANY TROUBLE. A HUMMOCKY SURFACE IS BAD BECAUSE IT WILL LIFT A SWEEP OUT OF THE GROUND AND LET THE TRASH COLLECT ON THE BLADE. I'D RECOMMEND, IN THAT CASE, THAT THE FIELD BE LEVELED FIRST BY A VERY LIGHT DISCING OR SOME OTHER OPERATION. THEN THE MACHINE WILL OPERATE PERFECTLY."

WHEN MR. LOOS BEGAN HIS OPERATIONS, MANY OF HIS NEIGHBORS COULDN'T FIGURE OUT WHAT HE WAS DOING, SINCE THE SOIL DID NOT SEEM TO BE DISTURBED. BUT THE SOIL REALLY WAS CONSIDERABLY LOOSENED, AS A PERSON WOULD FIND IF HE TRIED DRIVING THROUGH A FIELD. THE STUBBLE, HOWEVER, WAS STILL INTACT ON THE SURFACE.

IT WAS SURPRISING HOW THE TRASH HAD SETTLED TO THE GROUND THROUGH THE SUMMER. THIS BROUGHT FORTH THE QUESTION AS TO HOW MANY OPERATIONS HAD BEEN PERFORMED DURING THE SEASON.

"THE THING THAT I REALLY LIKE," MR. LOOS SAID, IS HOW ECONOMICAL THIS KIND OF WORK IS. THREE OPERATIONS IN ALL--TWO WITH THE SUB-SURFACE TILLER, AND ONE OPERATION WITH THE ROD WEEDEER--AND THE FALLOW WAS AS CLEAN AS ANY I HAD SEEN ALL SUMMER."

IT WASN'T UNUSUAL TO SEE PLENTY OF WEEDS ON FALLOW BECAUSE THAT WAS A WET YEAR AND FARMERS DIDN'T HAVE ENOUGH HELP TO PERFORM THE OPERATIONS AT THE RIGHT TIME. MR. LOOS' THREE-STEP TILLAGE WAS IN SHARP CONTRAST TO THE USUAL SIX OR SEVEN OPERATIONS IN THAT LOCALITY. "MY BROTHER PERFORMED SEVEN OPERATIONS ON HIS PLACE, SO I FIGURED I SAVED QUITE A LITTLE TIME AND EXPENSE," MR. LOOS COMMENTED.

"HOW ABOUT DRILLING? DID THE TRASH GIVE YOU ANY TROUBLE?", MR. LOOS WAS ASKED.

"NO, I USED A SEMI-DEEP FURROW DRILL WITH SHARPENED DISCS AND I HAD NO TROUBLE," HE REPLIED.

MR. LOOS' WHEAT CERTAINLY LOOKED GOOD. IT WAS A RATHER WINDY MARCH DAY AND THE SOIL WAS MOVING OFF OF SEVERAL NEARBY FIELDS, BUT THE TRASH AND COVER THAT MR. LOOS HAD LEFT WAS HOLDING THE SOIL PERFECTLY.

EXAMINATION OF THE DEPTH OF MOISTURE ON THREE FIELDS WHERE DIFFERENT FALLOW OPERATIONS HAD BEEN PERFORMED, SHOWED THERE WAS ABOUT ONE FOOT MORE MOISTURE WHERE THE TRASH HAD BEEN LEFT ON THE SURFACE AND THE PERCENTAGE OF MOISTURE WAS CONSIDERABLY HIGHER THAN WHERE THE STUBBLE HAD BEEN CLEARED OFF, OR PLOWED UNDER. THE CONDITION OF THE SOIL WAS IMPRESSIVE. ON TWO FIELDS WHERE THE FALLOW HAD BEEN PERFORMED BY OTHER IMPLEMENTS, THE SOIL WAS HARD AND COMPACT. SOIL TREATED WITH THE SUB-SURFACE TILLER HAD A NICE TILTH. IT WAS COMPACT ENOUGH, BUT WAS IN CONDITION TO ABSORB A HEAVY RAIN. IN BOTH OF THE OTHER CASES A LARGE AMOUNT OF WATER WOULD HAVE BEEN LOST IN RUNOFF.

AS THE MEN LEFT THE FIELDS, MR. LOOS SUMMED UP HIS IDEAS ABOUT THIS CONSERVATION FARMING PRACTICE THEY HAD BEEN DISCUSSING.

"WELL, IF WE CAN SAVE LABOR, WEAR AND TEAR ON MACHINERY, AND INCREASE THE YIELDS BY CUTTING DOWN ON THE AMOUNT OF MOISTURE LOST THROUGH EVAPORATION AND RUNOFF, I WILL CERTAINLY BE REPARED FOR TRYING OUT THIS NEW TYPE OF OPERATION. I CERTAINLY THINK IT HAS A PLACE IN DRYLAND FARMING IN EASTERN COLORADO."

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